

trustees must establish whether natural resources were exposed, either directly or indirectly, to the discharged oil from the incident, and estimate the amount or concentration and spatial and temporal extent of the exposure. Trustees must also determine whether there is a pathway linking the incident to the injuries. Pathways may include, but are not limited to, the sequence of events by which the discharged oil was transported from the incident and either came into direct physical contact with a natural resource, or caused an indirect injury.

(e) *Injuries resulting from response actions or incidents involving a substantial threat of a discharge.* For injuries resulting from response actions or incidents involving a substantial threat of a discharge of oil, trustees must determine whether an injury or an impairment of a natural resource service has occurred as a result of the incident.

(f) *Selection of injuries to include in the assessment.* When selecting potential injuries to assess, trustees should consider factors such as:

- (1) The natural resources and services of concern;
- (2) The procedures available to evaluate and quantify injury, and associated time and cost requirements;
- (3) The evidence indicating exposure;
- (4) The pathway from the incident to the natural resource and/or service of concern;
- (5) The adverse change or impairment that constitutes injury;
- (6) The evidence indicating injury;
- (7) The mechanism by which injury occurred;
- (8) The potential degree, and spatial and temporal extent of the injury;
- (9) The potential natural recovery period; and
- (10) The kinds of primary and/or compensatory restoration actions that are feasible.

**§ 990.52 Injury assessment—quantification.**

(a) *General.* In addition to determining whether injuries have resulted from the incident, trustees must quantify the degree, and spatial and temporal extent of such injuries relative to baseline.

(b) *Quantification approaches.* Trustees may quantify injuries in terms of:

- (1) The degree, and spatial and temporal extent of the injury to a natural resource;
- (2) The degree, and spatial and temporal extent of injury to a natural resource, with subsequent translation of that adverse change to a reduction in services provided by the natural resource; or
- (3) The amount of services lost as a result of the incident.

(c) *Natural recovery.* To quantify injury, trustees must estimate, quantitatively or qualitatively, the time for natural recovery without restoration, but including any response actions. The analysis of natural recovery may consider such factors as:

- (1) The nature, degree, and spatial and temporal extent of injury;
- (2) The sensitivity and vulnerability of the injured natural resource and/or service;
- (3) The reproductive and recruitment potential;
- (4) The resistance and resilience (stability) of the affected environment;
- (5) The natural variability; and
- (6) The physical/chemical processes of the affected environment.

**§ 990.53 Restoration selection—developing restoration alternatives.**

(a) *General.* (1) If the information on injury determination and quantification under §§ 990.51 and 990.52 of this part and its relevance to restoration justify restoration, trustees may proceed with the Restoration Planning Phase. Otherwise, trustees may not take additional action under this part. However, trustees may recover all reasonable assessment costs incurred up to this point.

(2) Trustees must consider a reasonable range of restoration alternatives before selecting their preferred alternative(s). Each restoration alternative is comprised of primary and/or compensatory restoration components that address one or more specific injury(ies) associated with the incident. Each alternative must be designed so that, as a package of one or more actions, the